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Amending the Federal Water Pollution Control Act with respect to research and development activities.

IN THE HOUSE OF REPRESENTATIVES

FEBRUARY 24, 1993

Mrs. MORELLA introduced the following bill; which was referred jointly to the Committees on Science, Space, and Technology and Public Works and Transportation

JUNE 29, 1993

Additional sponsors: Mr. ACKERMAN, Mr. MFUME, Mr. HASTINGS, Mr. TOWNS, and Mr. GILCHREST

A BILL

Amending the Federal Water Pollution Control Act with respect to research and development activities.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Clean Water Act Re-
5 search Amendments of 1993”.

1 **SEC. 2. WATER QUALITY RESEARCH.**

2 (a) GENERAL AUTHORITY.—Section 104(a) of the
3 Federal Water Pollution Control Act (33 U.S.C. 1254(a))
4 is amended to read as follows:

5 “(a)(1) The Administrator, in cooperation with Fed-
6 eral, State, and local agencies and public or private insti-
7 tutions, organizations, or individuals, shall conduct and
8 promote a comprehensive program of research, investiga-
9 tions, experiments, surveys, and studies relating to the
10 causes, sources, effects, extent, prevention, detection, and
11 correction of water pollution.

12 “(2) In carrying out this section, the Administrator
13 may—

14 “(A) collect and make available, through publi-
15 cations and other appropriate means, the results of
16 research pursuant to this section;

17 “(B) encourage, cooperate with, and render
18 technical services to pollution control agencies and
19 other appropriate public or private institutions, or-
20 ganizations, and individuals;

21 “(C) conduct investigations concerning the pol-
22 lution of any navigable waters and report on the re-
23 sults of such investigations;

24 “(D) conduct research and make surveys con-
25 cerning the nationwide extent and seriousness of a
26 pollutant or class of pollutants in water;

1 “(E) develop, assess, collect, and disseminate
2 basic data on chemical, physical, and biological ef-
3 fects of varying water quality and other information
4 pertaining to water pollution and the prevention, re-
5 duction, and elimination thereof;

6 “(F) develop effective and practical processes,
7 methods, and prototype devices for the prevention,
8 reduction, and elimination of water pollution;

9 “(G) make grants to State water pollution con-
10 trol agencies, interstate agencies, other public or
11 nonprofit private agencies, institutions, organiza-
12 tions, and individuals to conduct research pursuant
13 to this section;

14 “(H) contract with public or private agencies,
15 institutions, organizations, and individuals, without
16 regard to sections 3648 and 3709 of the Revised
17 Statutes (31 U.S.C. 529; 41 U.S.C. 5) to conduct
18 research pursuant to this section;

19 “(I) utilize, on a reimbursable basis, facilities
20 and personnel of Federal scientific laboratories and
21 research centers;

22 “(J) convene conferences concerning water
23 quality and water pollution control research issues,
24 giving opportunity for interested persons to be heard
25 and to present papers at such conferences; and

1 “(K) acquire technical data, inventions, patent
2 applications, patents, licenses, and an interest in
3 lands, plants, equipment and facilities, and other
4 property rights by purchase, license, lease, or dona-
5 tion.”.

6 (b) WATER QUALITY RESEARCH COMMITTEE.—Sec-
7 tion 104(b) of the Federal Water Pollution Control Act
8 (33 U.S.C. 1254(b)) is amended to read as follows:

9 “(b)(1) There is hereby established a National Water
10 Quality Research Committee (hereafter in this subsection
11 referred to as the ‘Research Committee’) to advise the Ad-
12 ministrators in the implementation of the authorities of this
13 section and other related research activities of the Federal
14 Government and State and local governments.

15 “(2) The Research Committee shall—

16 “(A) identify major research needs and sci-
17 entific uncertainties regarding the causes, effects,
18 extent, prevention, reduction, and elimination of
19 water pollution;

20 “(B) ensure, to the extent practicable, that re-
21 search conducted pursuant to this section meets the
22 needs of State and local governments; and

23 “(C) facilitate, to the extent practicable, the co-
24 ordination of research programs pursuant to this

1 section and related research programs of other Fed-
2 eral agencies and State and local governments.

3 “(3) The Research Committee shall consist of—

4 “(A) a representative of the Administrator, who
5 shall chair the Research Committee;

6 “(B) a representative of the Secretary of Agri-
7 culture;

8 “(C) a representative of the Administrator of
9 the National Oceanic and Atmospheric Administra-
10 tion;

11 “(D) a representative of the Director of the
12 United States Geological Survey;

13 “(E) a representative of the Director of the
14 Fish and Wildlife Service;

15 “(F) five representatives of State environmental
16 agencies, to be appointed by the Administrator; and

17 “(G) five representatives of the academic com-
18 munity, to be appointed by the Administrator.

19 “(4) One of the members appointed initially under
20 paragraph (3)(F) and two of the members appointed ini-
21 tially under paragraph (3)(G) shall be appointed to terms
22 of 1 year each. Two of the members appointed initially
23 under paragraph (3)(F) and one of the members ap-
24 pointed initially under paragraph (3)(G) shall be ap-
25 pointed to terms of 2 years each. All other members ap-

1 pointed under paragraph (3) (F) and (G) shall be ap-
2 pointed to terms of 3 years each.

3 “(5) Members appointed under paragraph (3)(G)
4 shall receive travel expenses, including per diem in lieu
5 of subsistence, as provided in section 5703 of title 5, Unit-
6 ed States Code.

7 “(6) The Research Committee shall submit to the
8 Congress on January 1 of each year after the date of en-
9 actment of the Clean Water Act Research Amendments
10 of 1993 a report which shall—

11 “(A) describe the research conducted pursuant
12 to this section in the preceding year and the results
13 of such research;

14 “(B) identify the highest priority research
15 needs for the following 5-year period, identify the
16 approximate cost of such research, and the relation-
17 ship of such research to the goals and objectives of
18 this Act;

19 “(C) describe research activities pursuant to
20 this section and related research authorities planned
21 for the coming year and the extent to which such re-
22 search will address the priority research needs iden-
23 tified in subparagraph (B); and

1 “(D) identify opportunities to improve coordina-
2 tion of research among Federal agencies and the
3 States.”.

4 **SEC. 3. WATER QUALITY MONITORING COUNCIL.**

5 Section 305 of the Federal Water Pollution Control
6 Act (33 U.S.C. 1315) is amended by adding at the end
7 thereof the following new subsection:

8 “(d) WATER QUALITY MONITORING COUNCIL.—(1)
9 There is established a Water Quality Monitoring Council
10 (hereafter in this subsection referred to as the “Council”)
11 to ensure the effective coordination of Federal and State
12 surface and ground water quality monitoring programs.

13 “(2) The membership of the Council shall be—

14 “(A) a representative of the Administrator, who
15 shall cochair the Council;

16 “(B) a representative of the Director of the
17 United States Geological Survey, who shall cochair
18 the Council;

19 “(C) a representative of the Secretary of Agri-
20 culture;

21 “(D) a representative of the Administrator of
22 the National Oceanic and Atmospheric Administra-
23 tion;

24 “(E) a representative of the Director of the
25 Fish and Wildlife Service;

1 “(F) five representatives of State environmental
2 protection agencies, to be appointed by the Adminis-
3 trator; and

4 “(G) five representatives of the academic com-
5 munity, to be appointed by the Administrator in
6 consultation with the Director of the United States
7 Geological Survey and the Administrator of the Na-
8 tional Oceanic and Atmospheric Administration.

9 “(3) The Council shall—

10 “(A) identify all Federal surface and ground
11 water quality monitoring programs;

12 “(B) oversee the implementation of Federal
13 surface and ground water quality monitoring pro-
14 grams;

15 “(C) coordinate the establishment of consistent
16 quality assurance standards for Federal surface and
17 ground water quality monitoring programs; and

18 “(D) coordinate the establishment of procedures
19 and methods for statistical analysis of monitoring
20 data and data management systems.

21 “(4) The Administrator, in cooperation with the
22 Council, shall issue guidance not less often than annually
23 to State agencies, the United States Geological Survey, the
24 National Oceanic and Atmospheric Administration, and
25 such other Federal agencies as are considered appropriate

1 by the Administrator, to ensure the effective and coordi-
2 nated implementation of surface and ground water quality
3 monitoring programs.

4 “(5) Within 2 years after the date of enactment of
5 this subsection, the Administrator, in cooperation with the
6 Council, shall submit to the Congress a strategy for the
7 coordinated implementation of Federal surface and
8 ground water quality monitoring programs. Such strategy
9 shall describe the roles and responsibilities of Federal
10 agencies, methods of coordination among Federal agen-
11 cies, the anticipated level of resources to be devoted to sur-
12 face and ground water quality monitoring programs by
13 each Federal agency, and measures to ensure that Federal
14 surface and ground water quality monitoring programs
15 are responsive to the monitoring needs of States to the
16 fullest extent practicable.

17 “(6) The Administrator, in cooperation with the
18 Council, shall prepare and submit to the Congress by Jan-
19 uary 1, 1997, and biennially thereafter, a report describ-
20 ing the findings of surface and ground water quality mon-
21 itoring programs and providing a comprehensive assess-
22 ment of conditions and trends in the quality of surface
23 and ground waters throughout the Nation. The report
24 shall also identify needed changes to Federal and State
25 surface and ground water quality monitoring programs,

1 including the adequacy of funding for the accomplishment
2 of such programs.”.

3 **SEC. 4. NONPOINT SOURCE POLLUTION RESEARCH AND**
4 **CONTROL MEASURES.**

5 Section 104 of the Federal Water Pollution Control
6 Act (33 U.S.C. 1254) is amended by adding at the end
7 the following new subsection:

8 “(v) The Administrator, in consultation with the Na-
9 tional Oceanic and Atmospheric Administration, the Unit-
10 ed States Geological Survey, the Fish and Wildlife Service,
11 and the Department of Agriculture, shall conduct a com-
12 prehensive program of research, testing, and technology
13 development of methods for sampling, measuring, mon-
14 itoring, and modeling, and development of methods for the
15 control of nonpoint sources of pollution. The Adminis-
16 trator shall establish categories of nonpoint sources for the
17 purposes of such research program, including sources of
18 pollution in connection with mining and silviculture activi-
19 ties, urban runoff, and both irrigated and nonirrigated ag-
20 ricultural activities. Such program shall include the follow-
21 ing elements:

22 “(1) Identification of regionally representative
23 ecosystems in each of the categories established by
24 the Administrator.

1 “(2) Methods to evaluate the effects of episodic
2 loadings of multiple pollutants and their aggregate
3 effects in receiving waters, including effects on both
4 water quality and water quantity.

5 “(3) Development of improved quantitative
6 models and monitoring systems for evaluating and
7 quantifying the linkage between various land use
8 practices, precipitation, surface and ground water
9 flows, and pollutant loads. Emphasis shall be placed
10 on those models and systems which—

11 “(A) improve the ability to evaluate the
12 transport and fate processes from nonpoint
13 sources of pollution to both surface and ground
14 water;

15 “(B) improve the ability to identify sources
16 of contamination and quantitatively attribute
17 loadings to sources; and

18 “(C) improve the ability to identify and
19 evaluate region-specific or category-specific pre-
20 vention and control opportunities.

21 “(4) Research and development to identify and
22 develop pollution control measures, including alter-
23 native agriculture technologies, best management
24 practices, and land use control measures, suitable
25 for reducing or controlling the introduction of pollut-

1 ants in each of the various categories of nonpoint
2 sources established under this subsection. Such re-
3 search and development shall address—

4 “(A) a detailed description of methods,
5 measures, or practices, including structural and
6 legal controls such as changes in construction
7 and building practices and land use or zoning
8 laws, and operation and maintenance proce-
9 dures, that constitute each control measure;

10 “(B) a reliable method to make quan-
11 titative estimates of the pollution reduction ef-
12 fects of each measure;

13 “(C) a description of the categories and
14 subcategories of activities for which each meas-
15 ure may be suitable; and

16 “(D) an estimate and analysis of the com-
17 parative costs of implementing the methods,
18 measures, and practices described under sub-
19 paragraph (A).

20 “(5) Biennial reports to the Congress which de-
21 tail and assess the effectiveness of models and sys-
22 tems developed under paragraph (3) of this section
23 and which assess the effectiveness of nonpoint
24 source control measures identified or developed
25 under paragraph (4).”.

1 **SEC. 5. CONTAMINATED SEDIMENTS.**

2 Title I of the Federal Water Pollution Control Act
3 is amended by adding at the end the following new section:

4 **“SEC. 121. CONTAMINATED SEDIMENTS.**

5 “(a) SURVEY.—(1) The Administrator, in consulta-
6 tion with the National Oceanic and Atmospheric Adminis-
7 tration, the United States Geological Survey, and the
8 Corps of Engineers, shall conduct a comprehensive na-
9 tional survey of data regarding bottom sediment contami-
10 nation. The purpose of the survey is to assess the scope
11 and severity of sediment contamination and to identify
12 those areas for which additional pollution reduction re-
13 quirements may be required.

14 “(2) In conducting the survey under this subsection,
15 the Administrator shall compile all available information
16 on—

17 “(A) the quantity, chemical and physical make-
18 up, and geographic location of contaminated sedi-
19 ments;

20 “(B) the aquatic resources that may be in the
21 vicinity of the contamination; and

22 “(C) the degree of risk to public health and
23 aquatic life from the contamination.

24 “(b) SEDIMENT REMEDIATION OR REMOVAL.—The
25 Administrator shall conduct a program of research, test-
26 ing, and development of methods for improved remediation

1 and control of pollution problems resulting from contami-
2 nated sediments. Such program shall include the develop-
3 ment of improved, more cost-effective or innovative treat-
4 ment processes, including new treatment processes involv-
5 ing modified or engineered organisms, new technologies
6 and removal methods for dredge and dredge disposal oper-
7 ations, and new treatment processes or control methods
8 to lessen the release of odors from such sediment.

9 “(c) REPORT.—Not later than 2 years after the date
10 of enactment of this section, the Administrator shall sub-
11 mit a report to the Congress on the results of the program
12 conducted under this section, together with recommenda-
13 tions for remediating sediment contamination.”.

14 **SEC. 6. GROUND WATER RESEARCH.**

15 Section 104(m) of the Federal Water Pollution Con-
16 trol Act (33 U.S.C. 1254(m)) is amended to read as fol-
17 lows:

18 “(m)(1) The Administrator shall, in consultation with
19 the United States Geological Survey and the Department
20 of Agriculture, and in cooperation with other Federal
21 agencies and the States, conduct a comprehensive pro-
22 gram of research and investigation concerning ground
23 water quality.

24 “(2) Research pursuant to this subsection shall, at
25 a minimum, address—

1 “(A) the effects on human health of contami-
2 nants or combinations of contaminants, whether nat-
3 ural or anthropogenic, that are found in or that are
4 likely to be found in the ground waters of the United
5 States;

6 “(B) the effects on the environment, including
7 aquatic life, wildlife, and other environmental re-
8 sources, of contaminants;

9 “(C) the hydrologic relationship between sur-
10 face water and ground water and the likely impact
11 of contamination in one medium on the quality and
12 uses of the other;

13 “(D) methods and techniques for characterizing
14 and modeling subsurface flow, fate, and transport in
15 both the saturated and unsaturated zones;

16 “(E) the fate, transport, and distribution of
17 particular contaminants in the saturated and un-
18 saturated zones;

19 “(F) methods and techniques to characterize
20 the vulnerability of locations to contamination based
21 on factors including climate, vegetation, topography,
22 soil characteristics, and subsurface hydrology;

23 “(G) innovative methods and techniques for site
24 characterization or sampling ground water, including

1 well construction, sample collection, and the storage
2 of samples before analysis;

3 “(H) methods and techniques for monitoring,
4 sampling, and analyzing discharge to the subsurface;

5 “(I) the design and operation of waste treat-
6 ment systems, including septic systems, land treat-
7 ment systems, and containment systems, that mini-
8 mize the potential for contaminants to reach ground
9 water;

10 “(J) methods and techniques for the remedi-
11 ation and restoration of contaminated ground water
12 resources; and

13 “(K) methods and techniques to design and op-
14 erate ground water recharge systems, including per-
15 colation, direct injection, and aquifer storage and
16 recovery, which would allow for the safe and effec-
17 tive reuse of reclaimed water in arid areas.”.

18 **SEC. 7. ECOSYSTEM AND WATER QUALITY STUDIES.**

19 Section 104 of the Federal Water Pollution Control
20 Act (33 U.S.C. 1254) is further amended by adding at
21 the end the following new subsection:

22 “(w) In carrying out this section and section 305 of
23 this Act, the Administrator, in consultation with the Na-
24 tional Oceanic and Atmospheric Administration, the Unit-
25 ed States Geological Survey, and the Department of Agri-

1 culture, shall conduct a comprehensive program of re-
2 search and development, including development of meth-
3 ods of sampling, measuring, monitoring, and analysis,
4 both to improve understanding of the status and trends
5 of ecosystems and to develop improved predictive models
6 upon which to base the standardized protocols to be estab-
7 lished under section 305(c). The categories or classes of
8 ecosystems for such research and development shall in-
9 clude rivers, streams, lakes, estuaries, coastal zones, wet-
10 lands, and fresh and marine water. Such program shall
11 include the following elements:

12 “(1) Identification of representative and critical
13 or priority ecosystems in each class.

14 “(2) Identification of the structure and function
15 of natural aquatic systems and an identification of
16 indices of the ecological health of such ecosystems.

17 “(3) Evaluation of ecosystems response to long-
18 term contamination by developing improved methods
19 and monitoring and modeling techniques to assess
20 toxicity persistence, sediment toxicity, and
21 bioaccumulation or teratogenic potential in living
22 aquatic resources, and by developing methods to
23 evaluate the efficacy of remediation practices.

24 “(4) Development of improved biological, bio-
25 chemical, and other monitoring and modeling tech-

1 niques and criteria to increase understanding of
2 functions and processes related to the ecological
3 health of water resources. Emphasis shall be placed
4 on those techniques and methods which—

5 “(A) improve the ability to determine the
6 origin, sources, and cycling of toxic materials,
7 nutrients, and other contaminants resulting
8 from natural or anthropogenic sources, includ-
9 ing atmospheric deposits, ground water con-
10 tamination, pesticide runoff, and other point
11 and nonpoint sources;

12 “(B) improve the ability to identify and
13 evaluate the ecological or water quality impacts
14 of control or remediation opportunities; and

15 “(C) develop biological or biochemical cri-
16 teria to serve as water quality criteria and to
17 serve as effective indicators of ecological health
18 for fresh and marine surface waters, ground
19 water systems, and fresh water and coastal wet-
20 lands.

21 “(5) Development of improved criteria to assess
22 the physical, biological, and chemical sources of
23 stresses affecting aquatic ecosystems, including im-
24 pacts on habitat and water quantity, and develop-
25 ment of improved modeling and monitoring criteria

1 to serve as reliable indicators of such stresses. The
2 criteria must consider the range of related
3 ecosystems (including surface and ground waters,
4 tributaries, wetlands, and runoff areas) that affect
5 or are affected by the specific water system as well
6 as the various functions served by the entire water
7 system (such as animal feeding or breeding ground,
8 recreational purpose, flood control, drinking water,
9 or irrigation).

10 **SEC. 8. ECOSYSTEM MONITORING PROTOCOLS.**

11 Section 305 of the Federal Water Pollution Control
12 Act (33 U.S.C. 1315) is amended by adding at the end
13 the following new subsection:

14 “(c)(1) Not later than 36 months after the date of
15 enactment of this subsection, the Administrator shall issue
16 protocols based on the research and development program
17 carried out under section 104(w) for the use of the States
18 in conducting the water quality assessments required in
19 subsection (b)(1) of this section. These protocols shall seek
20 to provide an appropriate degree of uniformity while still
21 addressing regional or local needs.

22 “(2) Protocols issued under this subsection shall in-
23 clude specific requirements for monitoring rivers, streams,
24 estuaries, coastal waters, and lakes, including monitoring

1 networks responsive to storm events. Such protocols shall
2 also address—

3 “(A) priority waters in each State which must
4 be assessed in order to derive usable data regarding
5 (i) the ecological status of the water bodies, and (ii)
6 the support of designated uses; and

7 “(B) uniform monitoring and modeling tech-
8 niques.”.

9 **SEC. 9. POLLUTION PREVENTION RESEARCH.**

10 Section 104 of the Federal Water Pollution Control
11 Act (33 U.S.C. 1254) is further amended by adding at
12 the end the following new subsection:

13 “(x) In carrying out this section, the Administrator
14 shall conduct a basic research technology development and
15 demonstration program to identify, test, and demonstrate
16 cost-effective preventive measures for sources of pollution
17 in complex watersheds having a mix of land use types, in-
18 cluding urban, suburban, agricultural, and industrial.
19 Such program shall include the following elements:

20 “(1) Development of improved strategies and
21 technologies for simultaneously reducing water in-
22 flow and infiltration into sewer systems and reduc-
23 ing or effectively treating toxic materials and other
24 pollutants.

1 “(2) Development of improved strategies and
2 technologies for preventing and reducing the infiltra-
3 tion of toxic materials into wastewater treatment fa-
4 cilities, including development of treatment processes
5 involving modified or engineered organisms.

6 “(3) Development of programs to enhance the
7 beneficial use of sludge.

8 “(4) Identification of wastewater sources that
9 are significant contributors to contaminated sedi-
10 ments that impair health and ecological systems.”.

11 **SEC. 10. WETLANDS RESEARCH.**

12 Section 104 of the Federal Water Pollution Control
13 Act (33 U.S.C. 1254) is further amended by adding at
14 the end the following new subsection:

15 “(y) In carrying out this section, the Administrator
16 shall conduct a basic research, development, and dem-
17 onstration program for wetlands. Such program shall in-
18 clude the following elements:

19 “(1) A determination of whether efficacious
20 methods exist for natural wetland preservation and
21 for wetland creation and restoration for both fresh
22 and salt water wetlands. Such program shall include
23 research on—

1 “(A) the hydrologic requirements of var-
2 ious plants and animals necessary to sustain
3 wetland ecosystems;

4 “(B) the importance of substrata to flora,
5 fauna, and various wetland functions such as
6 removal of toxic materials;

7 “(C) characteristics and rates of
8 revegetation with various types of plantings;

9 “(D) comparison of the functions of natu-
10 ral versus restored and created wetlands includ-
11 ing support of species, removal of toxic mate-
12 rials, and water quality enhancement;

13 “(E) comparison of the stability of natural
14 versus restored and created wetlands;

15 “(F) evaluation of the impact of sediments,
16 nutrients, toxic runoff, pedestrian use, off-road
17 vehicle use, and grazing on natural and both re-
18 stored and created wetlands; and

19 “(G) evaluation of management alter-
20 natives that would lessen impacts to natural
21 and both restored and created wetlands.

22 “(2) Evaluation of the uses of constructed mul-
23 tipurpose wetlands for environmental enhancement
24 as well as the management of water quality prob-
25 lems, waste disposal practices, and various other

1 types of water impoundments. Such program shall
2 include research on—

3 “(A) evaluation of the ability of con-
4 structed multipurpose wetlands to provide bio-
5 logical diversity, habitat value, and recreational
6 opportunities, to control erosion and remove
7 and treat contaminants from natural or anthro-
8 pogenic sources, and to protect water quality to
9 the same extent as do naturally occurring wet-
10 lands;

11 “(B) development of design criteria capa-
12 ble of optimizing the environmental value and
13 treatment capacity of constructed multipurpose
14 wetlands; and

15 “(C) identification of strategies to incor-
16 porate the use of constructed multipurpose wet-
17 lands into comprehensive water resource man-
18 agement programs.”.

19 **SEC. 11. TECHNOLOGY DEMONSTRATION PROGRAM.**

20 Section 105 of the Federal Water Pollution Control
21 Act (33 U.S.C. 1255) is amended to read as follows:

22 “TECHNOLOGY DEMONSTRATION PROGRAM

23 “SEC. 105. (a) IN GENERAL.—The Administrator
24 shall establish a program to develop and demonstrate
25 practices, methods, technologies, or processes which may

1 be effective in prevention and control of industrial and mu-
2 nicipal sources or potential sources of water pollution.

3 “(b) GRANT ASSISTANCE.—(1) The Administrator
4 may provide grants to public agencies and authorities,
5 nonprofit organizations and institutions and enter into co-
6 operative agreements or contracts with other persons to
7 demonstrate water pollution control practices, methods,
8 technologies, or processes.

9 “(2) The Administrator may assist demonstration ac-
10 tivities only if—

11 “(A) such demonstration activity will serve to
12 demonstrate a new or significantly improved prac-
13 tice, method, technology, or process or the feasibility
14 and cost effectiveness of an existing, but unproven,
15 practice, method, technology, or process and will not
16 duplicate other Federal, State, local, or commercial
17 efforts to demonstrate such practice, method, tech-
18 nology, or process;

19 “(B) such demonstration activity meets the re-
20 quirements of this section and serves the purposes of
21 this Act;

22 “(C) the demonstration of such practice, meth-
23 od, technology, or process will comply with all other
24 laws and regulations for the protection of human
25 health, welfare, and the environment; and

1 “(D) in the case of a contract or cooperative
2 agreement, such practice, method, technology, or
3 process would not be adequately demonstrated by
4 State, local, or private persons or in the case of an
5 application for financial assistance by a grant, such
6 practice, method, technology, or process is not likely
7 to receive adequate financial assistance from other
8 sources.

9 “(3) The demonstration program established by this
10 subsection shall include solicitations for demonstration
11 projects, selection of suitable demonstration projects from
12 among those proposed, supervision of such demonstration
13 projects, evaluation of the results of demonstration
14 projects, and dissemination of information on the effec-
15 tiveness and feasibility of the practices, methods, tech-
16 nologies, and processes which are proven to be effective.

17 “(4) Within 180 days after the date of enactment of
18 the Clean Water Act Research Amendments of 1993, and
19 no less often than annually thereafter, the Administrator
20 shall publish a solicitation for proposals to demonstrate,
21 by prototype or at full-scale, practices, methods, tech-
22 nologies, and processes which are (or may be) effective in
23 controlling sources or potential sources of water pollution.
24 The solicitation notice shall prescribe the information to
25 be included in the proposal, including technical and eco-

1 nomic information derived from the applicant's own re-
2 search and development efforts, a proposed demonstration
3 plan setting forth how and when the project is to be car-
4 ried out, and other information sufficient to permit the
5 Administrator to assess the potential effectiveness and
6 feasibility of the practice, method, technology, or process
7 proposed to be demonstrated.

8 “(5) In selecting practices, methods, technologies, or
9 processes to be demonstrated, the Administrator shall
10 fully review the applications submitted and shall evaluate
11 each project according to—

12 “(A) the potential for the proposed practice,
13 method, technology, or process to effectively control
14 sources or potential sources of pollutants which
15 present risks to human health, welfare, or the envi-
16 ronment;

17 “(B) the potential for the practice, method,
18 technology, or process to contribute to the advance-
19 ment of pollution control for an industry for which
20 an effluent guideline is published pursuant to section
21 304;

22 “(C) the potential for the practice, method,
23 technology, or process to effectively prevent the dis-
24 charge of pollutants which present risks to human
25 health, welfare, and the environment;

1 “(D) the potential for the practice, method,
2 technology, or process to contribute to the advance-
3 ment of treatment of sewage or the management of
4 sewage sludge;

5 “(E) the potential for the practice, method,
6 technology, or process to contribute to reductions of
7 pollution associated with nonpoint sources of pollu-
8 tion;

9 “(F) the capability of the person or persons
10 proposing the project to successfully complete the
11 demonstration as described in the application;

12 “(G) the likelihood that the demonstrated prac-
13 tice, method, technology, or process could be applied
14 in other locations and circumstances to control
15 sources or potential sources of pollutants, including
16 considerations of cost, effectiveness, and techno-
17 logical feasibility;

18 “(H) the extent of financial support from the
19 applicant to accomplish the demonstration as de-
20 scribed in the application; and

21 “(I) the capability of the applicant to dissemi-
22 nate the results of the demonstration or otherwise
23 make the benefits of the practice, method, tech-
24 nology, or process widely available to the public in
25 a timely manner.

1 “(6) The Administrator shall select or refuse to select
2 a project for demonstration under this subsection in an
3 expeditious manner. In the case of a refusal to select a
4 project, the Administrator shall notify the applicant of the
5 reasons for the refusal.

6 “(7) Each demonstration project under this sub-
7 section shall be performed by the applicant, or by a person
8 satisfactory to the applicant, under the oversight of the
9 Administrator.

10 “(8) Total Federal funds for any demonstration
11 project under this subsection shall not exceed 75 percent
12 of the total cost of such project. In cases where the Admin-
13 istrator determines that research under this section is of
14 a basic nature which would not otherwise be undertaken,
15 the Administrator may approve grants under this sub-
16 section with a matching requirement other than that speci-
17 fied in this paragraph, including full Federal funding.

18 “(c) REPORTS.—The Administrator shall, within 2
19 years after the date of enactment of the Clean Water Act
20 Research Amendments of 1993 and biennially thereafter,
21 publish general reports describing the findings of dem-
22 onstration projects conducted pursuant to subsection (b).

23 “(d) AUTHORIZATION.—There is authorized to be ap-
24 propriated to carry out this section \$20,000,000 for each
25 of the fiscal years 1994 through 2000.”.

1 **SEC. 12. AUTHORIZATION OF APPROPRIATIONS.**

2 There are authorized to be appropriated to the Ad-
3 ministrator for carrying out the amendments made by sec-
4 tions 2 through 10 of this Act \$65,000,000 for each of
5 the fiscal years 1994 through 2000.

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